

AMENDMENTS TO THE CLAIMS

Please amend claims 22, 28, 29 and 35, and add new claim 41 as shown on the following list of claims.

1-21. (Canceled)

22. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a wiring substrate having a first thickness, the wiring substrate further having a substrate first surface and a substrate second surface opposed to the substrate first surface, the wiring substrate having a plurality of conductive lines formed on the substrate first surface and a through hole extending between the substrate first and second surfaces;

providing a semiconductor IC chip having a second thickness that is smaller than the first thickness, the semiconductor IC chip further having a chip first surface, a chip second surface opposed to the chip first surface and a plurality of chip side surfaces extending between the chip first and second surfaces, the semiconductor IC chip including a plurality of bond pads formed on the chip first surface, wherein a size of the semiconductor IC chip is smaller than that of the through hole;

supporting the semiconductor IC chip in the through hole so that a level of the substrate first surface is substantially equal to a level of the chip first surface;

electrically connecting the bond pads with the conductive lines by a plurality of conductive members, respectively, while the supporting is maintained;

coating the conductive members, the chip first surface, the chip side surfaces, the through hole and a part of the substrate first surface, with a sealing resin, while the supporting is maintained; and

ceasing the supporting of the semiconductor IC chip so that the sealing resin is a substantially sole member for physically connecting the semiconductor IC chip with the wiring substrate.

23. (Previously Presented) A method of manufacturing a semiconductor device according to claim 22, wherein the connecting includes bonding a plurality of metal wires to the bond with the conductive lines.

24. (Previously Presented) A method of manufacturing a semiconductor device according to claim 22, wherein a height of the metal wires above the chip is about 150 to 250 μm .

25. (Previously Presented) A method of manufacturing a semiconductor device according to claim 22, wherein the connecting includes applying conductive paste between the bond pads and the conductive lines, respectively.

26. (Previously Presented) A method of manufacturing a semiconductor device according to claim 22, wherein the connecting includes disposing a mask on the substrate first surface and the chip first surface, the mask having a plurality of openings each of which exposes one of the bond pads, the conductive lines and a route connecting them, spreading conductive paste into the openings, and removing the mask.

27. (Previously Presented) A method of manufacturing a semiconductor device according to claim 22, wherein the connecting includes
providing a plurality of printing pastes,
locating the printing pastes on a transfer roller, and
moving the transfer roller on the substrate first surface and the chip first surface with a rotation so that the bond pads and the conductive lines are connected by the printing pastes.

28. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a wiring substrate having a first surface and a second surface opposed to the first surface, the wiring substrate having a plurality of conductive lines formed on the

substrate first surface and a through hole extending between the substrate first and second surfaces;

putting an adhesive sheet on the second surface so that the adhesive sheet is exposed through the through hole;

providing a semiconductor IC chip having a third surface, a fourth surface opposed to the third surface and a plurality of chip side surfaces extending between the third and fourth surfaces, the semiconductor IC chip including a plurality of bond pads formed on the third surface;

positioning the semiconductor IC chip on the exposed adhesive sheet in the through hole;

supporting the semiconductor IC chip so that a level of the first surface is substantially equal to a level of the third surface of the semiconductor IC chip;

electrically connecting the bond pads of the semiconductor IC chip with the conductive lines of the wiring substrate by a plurality of conductive members while the supporting is maintained;

coating the conductive wires, the third and side surfaces, the through hole and a part of the first surface with a sealing resin while the supporting is maintained; and

removing the adhesive sheet to cease ~~ceasing~~ the supporting of the semiconductor IC chip so that the sealing resin is a substantially sole member for physically connecting the semiconductor IC chip with the wiring substrate.

29. (Currently Amended) A method of manufacturing a semiconductor device according to claim 28, further comprising detaching the adhesive sheet from the second surface after the ceasing.

30. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein the connecting includes bonding a plurality of metal wires to the bond with the conductive lines.

31. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein a height of the metal wires above the chip is about 150 to 250 μm .

32. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein the connecting includes applying conductive paste between the bond pads and the conductive lines, respectively.

33. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein the connecting includes

disposing a mask on the substrate first surface and the chip first surface, the mask having a plurality of openings each of which exposes one of the bond pads, the conductive lines and a route connecting them,

spreading conductive paste into the openings, and
removing the mask.

34. (Previously Presented) A method of manufacturing a semiconductor device according to claim 28, wherein the connecting includes

providing a plurality of printing pastes,

locating the printing pastes on a transfer roller, and

moving the transfer roller on the substrate first surface and the chip first surface with a rotation so that the bond pads and the conductive lines are connected by the printing pastes.

35. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a wiring substrate having a first thickness, the wiring substrate further having a first surface and a second surface opposed to the first surface, the wiring substrate having a conductive pattern formed on the first surface and a through hole extending from the first surface to the second surface;

providing a semiconductor IC chip having a second thickness that is smaller than the first thickness, the semiconductor IC chip further having a third surface, a fourth surface opposed to the third surface and a plurality of side surfaces extending between the third and fourth surfaces, the semiconductor IC chip including a plurality of bond pads formed on the third surface, wherein a size of the chip is smaller than that of the through hole;

supporting the chip in the through hole so that the first surface and third surface create a substantially flat surface;

electrically connecting the bond pads with the conductive pattern by a plurality of conductive members while the supporting is maintained;

covering the conductive members, the third surface, the side surfaces, the through hole and a part of the first surface, with a sealing resin while the supporting is maintained; and

ceasing the supporting of the chip so that the sealing resin is a substantially sole member for physically connecting the chip with the wiring substrate.

36. (Previously Presented) A method of manufacturing a semiconductor device according to claim 35, wherein the connecting includes bonding a plurality of metal wires to the bond with the conductive lines.

37. (Previously Presented) A method of manufacturing a semiconductor device according to claim 35, wherein a height of the metal wires above the chip is about 150 to 250 μm .

38. (Previously Presented) A method of manufacturing a semiconductor device according to claim 35, wherein the connecting includes applying conductive paste between the bond pads and the conductive lines, respectively.

39. (Previously Presented) A method of manufacturing a semiconductor device according to claim 35, wherein the connecting includes

disposing a mask on the substrate first surface and the chip first surface, the mask having a plurality of openings each of which exposes one of the bond pads, the conductive lines and a route connecting them,

spreading conductive paste into the openings, and
removing the mask.

40. (Previously Presented) A method of manufacturing a semiconductor device according to claim 35, wherein the connecting includes

providing a plurality of printing pastes,

locating the printing pastes on a transfer roller, and

moving the transfer roller on the substrate first surface and the chip first surface with a rotation so that the bond pads and the conductive lines are connected by the printing pastes.

41. (New) A method of manufacturing a semiconductor device according to claim 28, wherein the wiring substrate has a first thickness and the semiconductor IC chip has a second thickness that is smaller than the first thickness.